

ABSTRACT

A transmission apparatus which prevents adversely affects from an adjacent channel even without provision of a guard band. An information sequence 1 input to a mapping unit 21-1 of the transmission apparatus is mapped onto predetermined signal points by QAM modulation, etc. and output to a frequency converter 22-1. The frequency converter 22-1 converts the frequency according to a center frequency of an input signal and outputs the result to a multiplexer 23. The other data series are processed in the same way as the data series 1 are output to the multiplexer 23. The multiplexer 23 multiplexes a plurality of input signals, while an IFFT processor 24 performs an inverse Fourier transform on the multiplexed signals all at once. The inverse Fourier transformed signal is quadrature-modulated by a quadrature modulator 26, converted to the RF band signal by the frequency converter 28, and transmitted from an antenna 30.